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## (54) SYSTEM AND METHOD FOR MONITORING OPTICAL LINK AND FOR SPECIFYING STATE OF THE LINK

(57)Abstract:

**PROBLEM TO BE SOLVED:** To specify or detect the soundness of an optical link by allowing a 2nd device to monitor the optical link, based on the received optical signal having the first wavelength and then detect the state of the optical link.

**SOLUTION:** An optical signal having wavelength  $\lambda_1$  is produced by a laser site source 120 and supplied to one of inputs of a WDM 124. Another optical signal having wavelength  $\lambda_2$  is received from a transmitter 102 and supplied to the other input of the WDM 124. Both optical signals of  $\lambda_1$  and  $\lambda_2$  are transmitted to an optical link 106 via the WDM 124. A transmitter 114 produces an optical signal having wavelength  $\lambda_3$ , which is supplied to one of inputs of a WDM 130. The optical signals of  $\lambda_1$  and  $\lambda_3$  are transmitted to a central station via the WDM 130 and then to a system optical link 108. In

